To the Augustine Commission,
This a second copy of an email from a month ago I forgot to add the words "please post these comments on your public submitted documents page"

A method to insure access to LEO and GTO and beyond.
Simply put we need to insure a mass market for launch vehicles over an extended period of time much as the postal service did for the early airline industry.
My ideas on how to replace Yucca mountain nuclear waste 'storage' project and create a mass commercial market for launch vehicles , space based solar power production and space based nuclear power generation.
A mission for the (proposed) federal Space Based Solar Power Corporation
In partnership with the
Office of Civilian Radioactive Waste Management
Office of Civilian Radioactive Waste Management is responsible for the disposal of nuclear waste in the USA. How does it work ?
What follows is from there web site

“Customers who use nuclear power pay for the disposal of spent fuel. The federal government collects a fee of one mil (one-tenth of a cent) per kilowatt-hour of nuclear-generated electricity from utilities.
This money goes into the Nuclear Waste Fund. As of December 31, 2008, payments and interest credited to the Fund totaled $29.6 billion.
The Department of Energy receives money from the Nuclear Waste Fund through congressional appropriations."

http://ocrwm.doe.gov/uploads/1/Financial_and_Budget_Summary__February_2009.pdf

http://ocrwm.doe.gov/uploads/1/Blue_book_June_2009.pdf

http://ocrwm.doe.gov/uploads/1/2008_Fee_Adequacy.pdf

http://acdis.illinois.edu/assets/docs/439/39PlanD39forSpentNuclearFuel.pdf

I have further refined my ideas about space based solar power and the federal corporation that would bring it about. namely that the same power transmitters on the solar power satilights would also transmit power from a vast array of nuclear power generators.

1(A) The USA would enter into an international agreement to have France , United Kingdom ,Japan and Russia
reprocess our defense and civilian nuclear waste. In exchange they could keep a portion of the reprocessed fuel. We would manufacturer space based nuclear reactors from the portion returned to us.
We would launch the reactors to the SSP to add to its production.

1(B) the reprocessing would be free to the US government or increase the mil per kilowatt hour payable to the fund to pay for our own reprocessing.
1(C) A federal bond issue would pay for the mass manufacturer of the nuclear reactors
1(D) the bond issue would be repaid by electrical sells from the SSP/nuclear reactors
1(E) The OCRWM would pay for the launch of these reactors out of the biosphere to the SSP in GTO thus full filling its mission of disposal of the "waste"

There was 130,000 metric tons of heavy metal forecast to have been buried at yucca mountain through to 2046. The nuclear waste fund was forcast to have earned $ 90 billion over this period! this is nuclear fuel pellets encased in there metal cladding. The fuel rods. lets assume 4 % of this is fissionable material. 5,200 metric tons of plutonium and uranium manufactured into space based reactors lets double this weight for the fuel and the reactor material 10,400 metric tons divided by 50 metric tons payload for our launch vehicle. That comes to 208 launchers , 208 reactors.

But this is wrong as the heavy fissile metals make up more then 80% of the waste BY WIEGHT.
Wikipedia does not make this clear in some of there articles
So a more accurate assessment is that 100,000 MT is uranium and plutonium and this could be be reprocessed into space based reactor fuel.
With a launch vehicle at 80 metric tons to GTO this comes out to 750 launchers! But over a period of 2 to 3 decades. I am assuming here we are using the side mounted shuttle derived heavy lift vehicle however I am suggesting a mass market for EELV's as well.
750 launchers at $100 million a piece comes out to $75 billion just short of what the DOE was going to receive from the civilian waste fund for the canceled yucca mountain.750 launchers divided by say 15 years comes out to 50 launches per year!
A "small scale SSP"
http://news.cnet.com/8301-11128_3-10218788-54.html
http://www.msnbc.msn.com/id/30198977/
lets take our small SSP project above as an example. They propose 4 to 5 heavy launchers for there power sat. They suggest assembly in low earth orbit and then a ion power to GTO using solar power to get there. So my idea is that each powersat would dock with one nuclear reactor launched by the Office of Civilian Radioactive Waste Management.
So that's a commercial need for 750 launchers + the 4 needed by the powersat corporation for each powersat so this comes to 3000 additional vehicles.
Like the F-16 and F-135 weapons systems we would have to prototype and then test flight the SSP/Nuclear powersats but then ramp up production to the 40 to 50 launches a year. ramping up the production gradually would enable initial electrical sells to make an impact to some extent on capital expenditures and show us the way forward.

So the Office of Civilian Radioactive Waste Management would be in effect subsidizing SSP power but electrical sells would offset the costs of building those thousands of reactors and to some extent pay for our civilization building a economy in cisluner space.IF nuclear fuel reprocessing is unavailable take spent fuel rods that have been in dry storage casks for several decades and place them in payload shrouds and store them in a super GTO orbit for storage in till they are retrieved for reprocessing on orbit by some future program however you would have to "sea launch" such a payload far out in the pacific where no abort scenario could occur over land!

The details,

Cancel Ares I but finish the J2X engine and the 5 segment booster.IF it makes since finish the upper stage as well as an EELV upper stage and/or as a future upper stage for a shuttle derived vehicle.
develop now the side mounted shuttle derived vehicle as a cargo launcher.
human rate one or both EELV,s
But keep the two COTS contracters
as they come on line add to side mount vehicle the 5 segment SRB and perhaps the J2X.
evolve the side mount into Ares IV or Direct in the next decade.
Fly now flexible path missions to lunar flyby,lunar orbit , NEO , and CERES and eventualy Phobos.
Ceres has water!
ceres is low a gravity world
use the side mount and EELV to fly early SSP/nuclear power demonstration missions.
Solerion could be a space act agreement mission with DOE funding.

Yours

SRA Steven Torry Rappolee
Michigan Air national Guard